In the Claims:

Please amend the claims as follows:

1. (currently amended) A system for remote programming of an industrial robot, the ~~An augmented reality~~ system comprising:

a camera for capturing an image, the camera being movably located on the robot at a local site,

a first registering ~~unit, generating~~ unit configured to generate graphics and ~~registering~~ register the ~~generated~~ graphics generated by the first registering unit on ~~to~~ the image from the camera, to provide a composite augmented reality image,

a remote display device located at a remote site, physically separated from the local site, for displaying a view comprising the composite augmented reality image, ~~and~~

~~a communication link, for communication of information between the local and the remote site,~~

~~wherein the system further comprises~~ a first specifying ~~unit, for specification of~~ unit configured to specify a position and an orientation in the remote site by determining a position and an orientation of the remote display device in relation to a fixed remote coordinate system, wherein a position and orientation of the camera is dependent on the position and orientation specified by the first specifying unit, and wherein the first registering unit is adapted to register the generated graphics to the image in dependence on the position and orientation specified by the first specifying unit,

a second specifying unit configured to specify a position and an orientation at the local

site,

a second registering unit configured to generate graphics and register the generated graphics on an environment at the local site or an image of the environment of the local site, in dependence on the position and the orientation specified by the second specifying unit,

a local display device configured to display the environment at the local site and the graphics generated by the second registering unit projected on the environment, and

a communication link configured to communicate information between the local site and the remote site, and to communicate to the robot positions and orientations specified by the first specifying unit and the second specifying unit,

~~the camera is arranged such that its position and orientation is dependent on the specified position and orientation, and the registering unit is adapted for registering the generated graphics to the image in dependence of the specified position and orientation~~ wherein the graphics generated by the first registering unit and second registering unit comprise information regarding movement of the robot.

2. (currently amended) The system according to claim 1, wherein said first specifying unit comprises a tracking ~~unit,~~ unit adapted ~~for determining the~~ to determine a position and orientation of a movable device located at the remote site, the first registering unit ~~is~~ adapted ~~for registering~~ to register the generated graphics ~~to~~ on the image in dependence of the position and orientation of the movable device, and the camera is arranged such that its position and orientation are dependent on the position and orientation of the movable device.

3. (currently amended) The system according to claim 2, wherein said movable device is

the remote display device.

4. (currently amended) The system according to claim 1, ~~further comprising a~~ wherein the industrial robot is located at the local site, wherein the camera is mounted on the industrial robot and wherein the industrial robot is arranged in such a manner that ~~the~~ movement of the industrial robot depends on the specified position and orientation.

5. (currently amended) The system according to claim 1, further comprising

a graphical ~~generator, for generation of~~ generator configured to generate a graphical representation, ~~and~~ wherein the registering unit is adapted ~~for generating~~ to generate graphics based on the graphical representation.

6. (currently amended) The system according to claim 1, further comprising

operator input ~~means,~~ means located at the remote ~~site, provided for feeding~~ site and configured to feed data related to the graphics to be displayed to the system, ~~and~~ wherein the system is adapted ~~for generating~~ to generate the graphics based on said data.

7. (currently amended) The system according to claim 6, wherein said operator input means comprises a pointing device and a tracking unit ~~for determining the~~ configured to determine a position of the pointing device and ~~that~~ wherein the system is adapted ~~for generating~~ to generate a graphical representation of a point ~~being presently~~ pointed out by the pointing member based on the position of the pointing device.

8. (cancelled)

9. (currently amended) The system according to claim ~~8~~ 1, further comprising

a second movable device located at the local site, wherein the second specifying unit comprises a second tracking ~~unit, for determining~~ unit configured to determine the position and the orientation of the second movable device.

10. (currently amended) The system according to claim ~~11~~ 9, wherein said second movable device is the local display device.

11. (currently amended) The system according claim 9, further comprising

a second camera for capturing an image, the camera being arranged in a fix relation to the second movable device, ~~and~~ wherein the second registering ~~unit,~~ unit is adapted ~~for registering~~ to register the generated graphics generated by the second registering unit to the image from the second camera, to provide a composite augmented reality image, and ~~that~~ wherein the local display device is adapted ~~for displaying~~ to display a view comprising the composite augmented reality image.

12. (currently amended) The system according to claim ~~8~~ 1, wherein the remote display device is adapted ~~for displaying~~ to display a view seen from a first visual angle that depends on the position and orientation received from the first ~~mentioned~~ specifying unit and wherein the local display device is adapted ~~for displaying~~ to display the same view as the remote display device seen from a second visual angle that depends on the position and orientation received

from the second specifying unit.

13. (previously amended) The system according to claim 1, further comprising means for transferring voices between the remote and the local site via the communication link.

14. (currently amended) The system according to claim 1, wherein the communication link ~~is~~ comprises a network.

15. (currently amended) A method for remote programming of an industrial robot by remotely displaying an augmented reality view comprising graphical information overlaid an image captured at a local site, the method comprising:

specifying a position and an orientation at a remote site that is physically separated from the local site with a tracking unit carried by or arranged on an operator at the remote site,

positioning and orienting the robot such that a camera arranged on the robot assumes ~~orientating a camera, located at the local site, according to~~ the specified position and orientation,

obtaining an image from the camera,

generating first graphics,

generating a composite augmented reality image with a registering unit based on the image, the generated first graphics, and the specified position and orientation, ~~and~~

displaying a view comprising the composite augmented reality image

specifying a position and an orientation in the local site,

displaying a second view comprising an environment of the local site and the generated

first graphics projected on the environment in dependence of the locally specified position and orientation, and

controlling movements of the robot at the local site and teaching the robot one or more waypoints to carry out a task.

16. (currently amended) The method according to claim 15, wherein specifying a position and an orientation comprises determining ~~the~~ a position and an orientation of a movable device located at the remote site and wherein the camera is positioned and ~~orientated~~ oriented according to the position and orientation of the movable device.

17. (currently amended) The method according to claim 16, wherein said movable device ~~is~~ comprises a remote display device and ~~that~~ wherein said view comprising the composite augmented reality image is displayed on the remote display device.

18. (currently amended) The method according to claim 15, wherein the camera is mounted on the robot, the method further comprising

controlling ~~the~~ movements of ~~a robot, having the camera mounted thereon,~~ the robot according to the position and orientation of the movable device.

19. (previously amended) The method according to claim 15, further comprising

obtaining data related to the generated first graphics to be displayed, and

generating the first graphics based on said data.

20. (currently amended) The method according to claim 15, further comprising

receiving information about the position of a pointing device and generating first graphics representing a ~~point, being presently~~ point pointed out by the pointing member, based on the position of the pointing device.

21. (cancelled)

22. (currently amended) The method according to claim ~~21~~ 15, wherein specifying a position and an orientation in the local site comprises determining ~~the~~ a position and an orientation of a second movable device located at the local site.

23. (currently amended) The method according to claim 22, wherein the second movable device ~~is~~ comprises a local display device and ~~that~~ wherein said second view, comprising the environment of the local site and the graphics, is displayed on the local display device.

24. (currently amended) The method according to claim 22, further comprising

capturing an image from a second camera being arranged in a ~~fix~~ fixed relation to the second movable device, ~~and~~

registering the generated graphics ~~to~~ on the image from the second camera, to provide a composite augmented reality image, and

displaying a view comprising the composite augmented reality image on the local display device.

25. (currently amended) The method according to claim ~~21~~ 15, further comprising

generating second graphics and

displaying the second view comprising the environment of the local site and the second graphics projected on the environment in dependence of the specified position and orientation.

26. (currently amended) The method according to claim 25, further comprising

generating a local graphical representation,

generating a remote graphical representation,

transferring the local and remote graphical representations between the local and the remote site,

generating the remote first ~~mentioned~~ graphics based on the local and the remote graphical representation, and

generating the second graphics based on the local and the remote graphical representation.

27. (currently amended) The method according to claim ~~21~~ 15, wherein the view displayed ~~in~~ at the remote site comprises the environment of the local site and the overlaid graphics seen from an visual angle that depends on the position and orientation specified in the remote site and the view displayed in the local site comprises the environment of the local site and the overlaid graphics seen from an visual angle that depends on the position and orientation specified in the local site.

28. (currently amended) A computer program product, comprising:

a computer readable medium; and

computer program instructions recorded on the computer readable medium and executable by a processor ~~directly loadable into the internal memory of a computer, comprising software code portions~~ for performing ~~the steps of claim 15, when said product is run on a computer~~ a method for remote programming of an industrial robot by remotely displaying an augmented reality view comprising graphical information overlaid an image captured at a local site, the method comprising

specifying a position and an orientation at a remote site that is physically separated from the local site with a tracking unit carried by or arranged on an operator at the remote site,

positioning and orienting a camera, located at the local site, according to the specified position and orientation,

obtaining an image from the camera,

generating first graphics,

generating a composite augmented reality image with a registering unit based on the image, the generated first graphics, and the specified position and orientation,

displaying a view comprising the composite augmented reality image

specifying a position and an orientation in the local site,

displaying a second view comprising an environment of the local site and the generated first graphics projected on the environment in dependence of the locally specified position and orientation, and

controlling movements of the robot at the local site and teaching the robot one or more waypoints to carry out a task.

29. (cancelled)

30. (currently amended) Use of a system according to claim 1 for remote programming of an industrial robot by controlling movements of the robot at the local site and teaching the robot one or more waypoints to carry out a task.

31. (previously amended) The system according to claim 11, further comprising a handheld display device comprising the display member and the camera.

32. (previously amended) The system according to claim 31, wherein the handheld display device is arranged so that the user seems to look directly through the display.

33. (currently amended) Use of the ~~method~~ system according to claim 1 for a paint application.